

CITRONIC®

16 Channel UHF Wireless Microphone System

(MU16H, MU26H, MU16N, MU26N)

User Manual



Features:

- PLL digitally tuned UHF
- Auto-mute on signal drop
- High quality microphone capsule
- 19" rack-mountable (1/2 width)
- IR tuning sync.
- Operates using AA batteries

Introduction:

Thank you for choosing the Citronic 16 channel UHF-series wireless system. This professional wireless set provides a high quality microphone with a tuneable PLL UHF radio system for ultimate wireless quality and versatility. Please read this manual before using this equipment in order to avoid damage through incorrect operation and to get the best performance from your purchase.

Contents:

Please take care when unpacking this product. Inspect for any damage and ensure you have the following components...

- UHF wireless receiver
- Mains power adapter
- 6.3mm mono jack lead
- 2 x 1.5V AA battery (4 pieces for MU26H and MU26N)
- Rack-mounting adapters
- Microphone / transmitter(s) – see table below

Model	Stock code	Microphone 1	Microphone 2
MU16H	171.829	Handheld transmitter	-
MU26H	171.832	Handheld transmitter	Handheld transmitter
MU16N	171.830	Discreet neckband mic. + bodypack	-
MU26N	171.833	Discreet neckband mic. + bodypack	Discreet neckband mic. + bodypack

Warning:

To prevent the risk of fire or electric shock, do not expose any of the components to rain or moisture.
If liquids are spilled on any component, stop using immediately, allow unit to dry out and have checked by qualified personnel before further use.
Avoid impact or heavy vibration to any of the components, dropping the microphone can cause capsule failure.
No user serviceable parts inside transmitter or receiver - refer servicing to qualified service personnel.

Safety

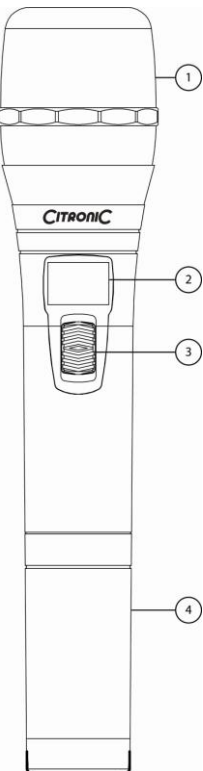
- Ensure that the correct adapter is used with adequate current rating and that the mains voltage is as stated on the adapter.
- Avoid ingress of water or particles into the transmitter(s) or receiver
- Use alkaline or NiMH batteries in the transmitter(s) and remove if unused for long periods.
- Observe the correct polarity when replacing batteries

Placement

- Keep all components out of direct sunlight and away from heat sources.
- Do not place heavy objects on top of the receiver or transmitter(s)
- If rack-mounting receivers in pairs, use the supplied rack ears and coupling brackets.
- If rack-mounting individually, secure the receiver to a 1U rack tray and do not place heavy equipment above the receiver.
- Keep the transmitter(s) and receiver away from damp or dusty environments.

Cleaning

- Use a soft cloth with a neutral detergent to clean the body of the microphone/transmitter and receiver.
- Lightly damp sterile wipes may be used on the microphone grille for hygiene purposes
- To avoid damage, do not use solvents to clean the components

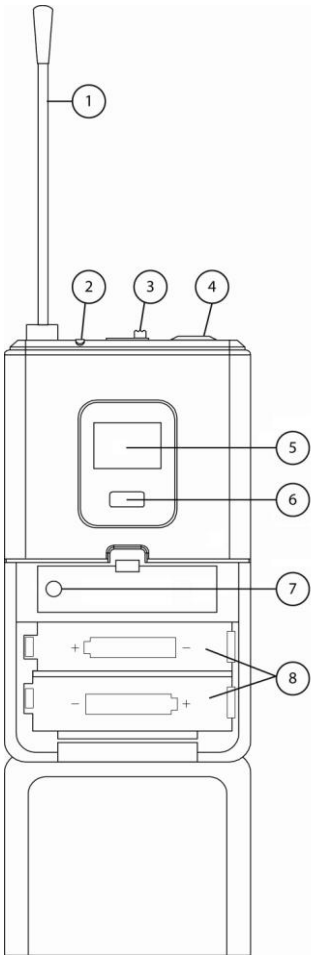


Handheld Transmitter

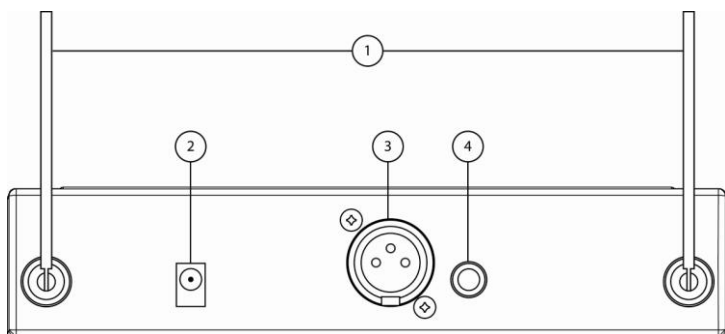
1. Windshield
 2. Backlit LCD display
 3. Slide switch – OFF/MUTE/ON
 4. Battery compartment cover

Bodypack Transmitter

1. UHF antenna
 2. LED indicator
 3. Sensitivity switch LINE-MIC
 4. MIC input, threaded 3.5mm jack
 5. Backlit LCD display
 6. ON/check button
 7. GAIN ADJUST rotary
 8. Battery compartment

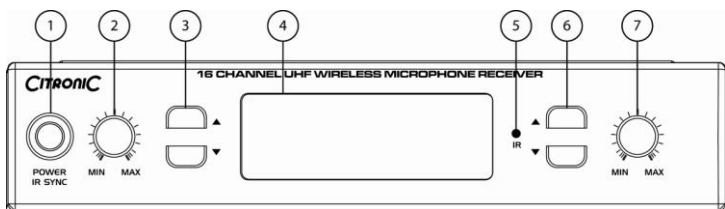


Receiver Rear Panel



1. Antennae (detachable BNC)
2. Power adapter input
3. Balanced XLR output
4. Unbalanced 6.3mm jack output

Receiver Front Panel



1. Power / IR Sync. button
2. Channel A volume control
3. Channel A frequency up/down
4. Backlit LCD display
5. IR sender
6. Channel B frequency up/down
7. Channel B volume control

Operation

For handheld transmitters, insert the supplied 2 x AA batteries by carefully unscrewing the base to reveal the battery compartment inside the microphone body, slide the batteries into the compartment (note: negative towards top of microphone) one behind the other and replace the compartment cover. To switch the transmitter on, move the slide switch to the first notch (MUTE) – the LCD backlight will illuminate – then move on another notch and the microphone will be switched on, showing the frequency and battery status – the backlight will go out after a few seconds.

For beltpacks, squeeze down the clip in the centre of the front panel of the beltpack to unfasten the lower half, which hinges outwards to reveal the battery compartment. Position the supplied 2 x AA batteries inside (ensure + and - are the correct way round for each) and then close the battery compartment flap until clipped back into position. If using a neckband or lavalier microphone, ensure that the sensitivity switch is set to the “mic” setting (the alternative setting is for use with instruments via a jack lead and will be quieter). To activate the transmitter, press and hold the ON / CHECK button (see diagram above) until the word “ON” is displayed – this is replaced by the frequency and battery status. The backlight will go out after a few seconds, pressing the “ON / CHECK” button momentarily switches the backlight on briefly.

Position the receiver within the best available line of sight to the transmitter(s) and connect the DC jack of the supplied power adapter to the receiver and the plug-top to the mains outlet. Turn microphone level(s) down on the receiver. Extend both antennae fully upwards and outwards slightly and press and hold the POWER / IR SYNC. Button for more than 2 seconds – this will switch the unit on.

Note: for dual sets (with 2 transmitters), both microphones' outputs will be mixed and fed to both balanced and unbalanced outputs.

Connect the jack or XLR (optional) lead to the receiver's audio output connector, turn down the volume of any equipment (mixer, amplifier etc.) that the signal will be fed into and then connect the jack or XLR to the equipment.

Warning! - take care not to point microphones towards speakers – this can cause damaging feedback (loud whistle or howling noise) – try to point microphones away from the speaker cabinets.

Tuning

The receiver LCD display shows the channel number (2 separate channel numbers on dual receivers) and RF and AF level meters to indicate if Radio Frequency (RF) carrier is being received and if Audio Frequency (AF) is being heard by the receiver.

To tune the transmitter(s) to the receiver, the receiver can send an Infra Red (IR) signal to the transmitter – this is called “IR Sync.” To activate this, select the desired channel using the Frequency Up/Down buttons (see diagram above) and the channel number selected will show on the LCD display. Briefly press (do not hold) the “POWER / IR SYNC” button on the receiver and the frequency value will flash on the LCD display.

For handheld units, hold the transmitter with the IR sensor (either on the end or rear of the microphone body) near to the IR sender on the UHF receiver unit (see diagram above). The display on the handheld unit will flash until both transmitter and receiver frequencies are matched and channel numbers stop flashing.

For beltpack units, open the battery compartment to reveal the IR sensor inside and hold this near to the IR sender on the UHF receiver. The display on the beltpack unit will flash until both transmitter and receiver frequencies are matched and channel numbers stop flashing.

In use

Gradually increase the microphone level(s) on the receiver and then increase the volume on the mixer or amplifier until the sound from the microphone can be heard through the equipment.

During use, it may be useful for the reception of the microphone to be muted for a short period of time (e.g. to avoid feedback when walking across the front of a speaker or avoid handling noise when placing the microphone down momentarily or adjusting a neckband microphone). In these circumstances, it may be better to move the transmitter switch to the “MUTE” position, which maintains the radio frequency carrier signal but mutes the microphone input. When this switch is moved back to the “ON” position, the sound will be immediately restored.

If the wireless system is not to be used for more than a few seconds, it is preferable to slide the transmitter switch to the “OFF” position, which mutes and deactivates the radio signal and powers down the transmitter. For beltpacks, hold the “ON / CHECK” button until the word “OFF” is displayed and release to power down. Be sure to turn down the volume of the mixer or amplifier and then switch off the receiver.

Unplug signal leads from the receiver and mixer or amplifier when moving or packing away. If the system is not to be used for long periods of time, remove the batteries from the transmitter and unplug the power adapter from the receiver and the mains outlet. Retracting and/or removing the antennae can also help avoid damage when the system is not in use.

SPECIFICATIONS	
Carrier type	UHF 863 - 865MHz (digital PLL tuning)
RF carrier stability	10PPM
Sensitivity	-105dB
Audio frequency response	40Hz – 20kHz
Signal to noise ratio	>105dB
Audio dynamic range	>80dB
T.H.D.	<0.5% @ 1kHz
Maximum range	50m
Operating temperature	-10°C to +50°C
RECEIVER	
Power supply	12 - 18Vdc 500mA (mains adapter supplied)
Audio outputs	XLR (balanced), Jack (unbalanced)
Controls	Power / IR SYNC, Channel volume(s), Frequency up/down
Indicators	Backlit LCD with Channel, RF and AF levels
Dimensions	45 x 200 x 175mm
Weight	905g
HANDHELD TRANSMITTER (MU16H, MU26H)	
Battery	3Vdc (2 x AA)
Switch	Power / Mute / On
RF emission	<10mW
Capsule type	Dynamic – hyper-cardioid response
Dimensions	255 x 50mmØ
Weight (without battery)	345g
BELTPACK TRANSMITTER (MU16N, MU26N)	
Battery	3Vdc (2 x AA)
Switch	Power / Mute / On
Connector	3.5mm mono jack - threaded
Compatible microphones	171.855, 171.856, 171.857
RF emission	<10mW
Dimensions (not inc. antenna)	110 x 68 x 25mm
Weight (without battery)	90g
NECKBAND MICROPHONE (MU16N, MU26N)	
Capsule type	Condenser - cardioid response
Power supply	3V phantom from beltpack
Connector	3.5mm mono jack - threaded
Dimensions	140 x 180 x 60mm
Weight	16g

FREQUENCY CHART				
Channel	Frequency (MHz)		Channel	Frequency (MHz)
1	863.35		9	864.25
2	863.45		10	864.35
3	863.55		11	864.45
4	863.65		12	864.55
5	863.75		13	864.65
6	863.85		14	864.75
7	863.95		15	864.85
8	864.15		16	864.95

Troubleshooting

No backlight on UHF receiver display	Ensure power adapter is connected to mains and working properly
	Ensure receiver is powered on
Receiver display is lit but no level on "RF" or "AF" meters	Ensure transmitter is switched on
	Check that transmitter is not out of reception range
	Try IR frequency sync-ing to ensure frequency of transmitter is same as receiver
	Check that transmitter batteries are good / charged
	Check if transmitter switch is in "MUTE" position
"RF" meter is showing good level but no "AF" and no sound	Check if neckband or lavalier microphone is connected to beltpack
	Ensure transmitter has good / charged batteries
	Check if there is another nearby transmitter with the same frequency – if so, switch frequencies
"RF" and "AF" meters showing good levels but no sound	Make sure receiver is connected to mixer / amplifier
	Make sure that receiver and amplifier / mixer channel volumes are turned up
Cannot Sync frequencies via IR SYNC.	Place IR Sensor closer to IR Sender
	Make sure the correct channel frequency value is flashing on UHF receiver unit
Microphone output is very loud or distorted	Turn down GAIN ADJUST on beltpack transmitter
	Turn down VOLUME on receiver
	Reduce Gain on mixer / amplifier
	Ensure that XLR output is not fed to a Line input
Microphone output is very low	Turn up GAIN ADJUST on beltpack transmitter
	Turn up VOLUME on receiver
	Increase Gain on mixer / amplifier
	Ensure that Jack output is not fed to a Mic input
	Ensure that Sensitivity switch is not set to Instrument level
	Check transmitter batteries

Note: for further troubleshooting, refer equipment to qualified service personnel for testing